



MARINE CORPS SYSTEMS COMMAND
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Transportation & Distribution Information Systems (TDIS)

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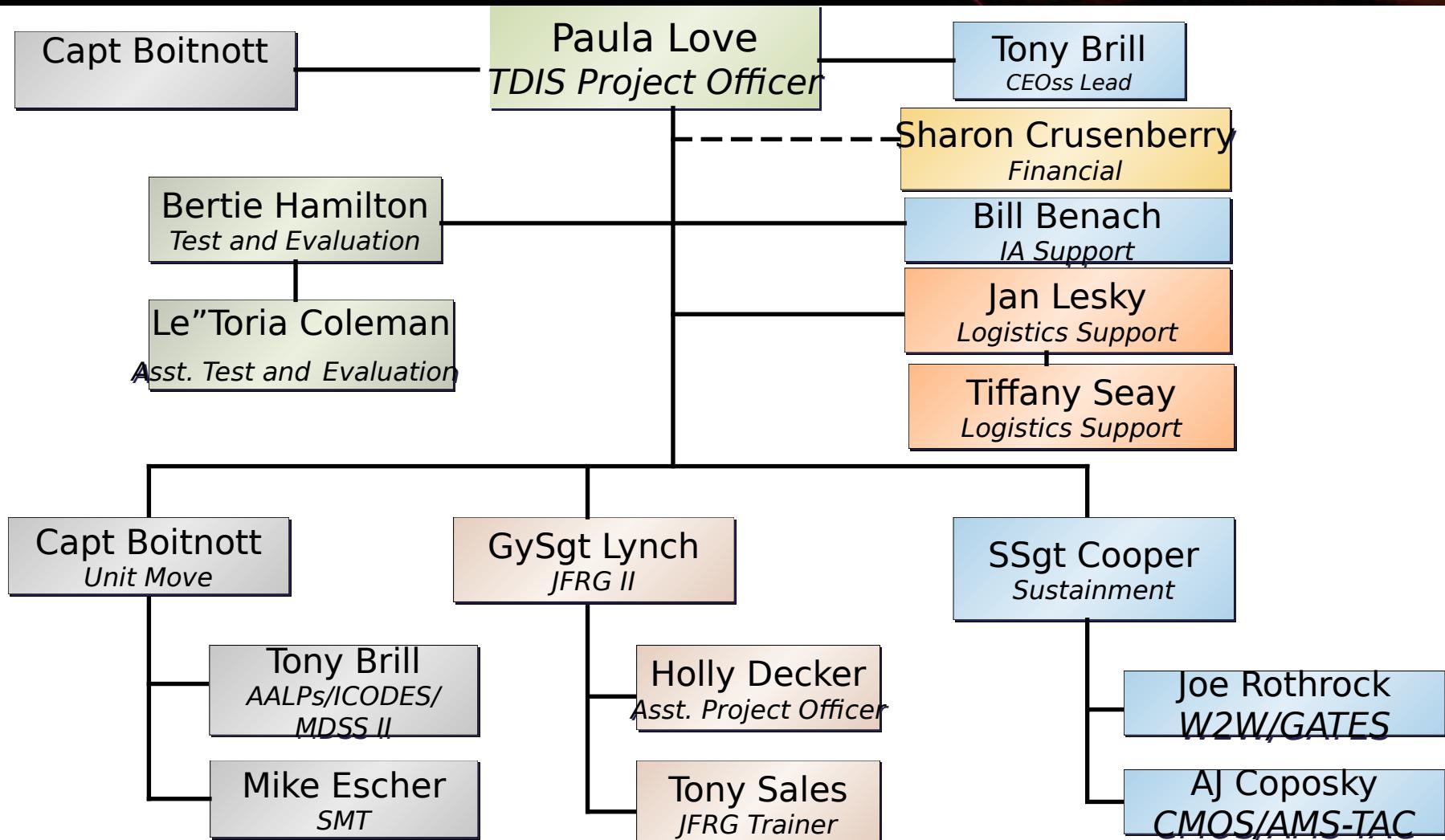
Mission

To develop, provide, and maintain integrated logistics systems that improve transportation, FDP&E, AIT, and distribution services to the Warfighter in a deployed and garrison environment, enhancing their war fighting capability.



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TDIS Applications



- ◆ **AMS-TAC - Automated Manifest System - Tactical**
- ◆ **CMOS - Cargo Movement Operations System**
- ◆ **W2W - Warehouse to War fighter**
- ◆ **Future Plans include integration of life cycle management responsibilities for:**
 - **TOPS, AGTR, GATES, Power track, GFM**
 - ◆ **Manpower and Funding Resources**



◆ AMS-TAC Current

- Fielded version 3.0.7
- Testing complete for version 3.1
 - ◆ SSAA/IA documentation in process
 - ◆ NMCI Certification pending resolution of challenges
 - Peer-to Peer or mapping is in violation of NMCI business rules
 - Using Unit budget for appropriate NMCI Seat assignment
 - Establishing seat assignments



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AMS-TAC



◆ AMS-TAC Future

- Alternatives
 - ◆ Web-enable in concert with client version (Navy/USMC venture)
 - ◆ Integration with W2W
 - ◆ Integration into CMOS
- Capabilities Based Assessment Team (CBAT) vision
- More Users MLG
- Functionality tradeoffs btw Services



CMOS

- ❖ 7.0 in IA certification process
- ❖ 7.1 certification will start upon completion of 7.0 upgrade
- ❖ Everyone should be writing RFID Tags out of CMOS for Iraq Shipments (IAW Policy)
- ❖ Working keyboard readers vice scanners
- ❖ Working 2d Barcode for 1348's
- ❖ Training 5-9 Jun, ANG, Harrisburg, PA.
 - Aug class unfunded
 - AIT Lab setup possible for mid term solution
- ❖ SPI Refresh, 55 Desk 18 Laptops
- ❖ Web-enable, USTC CBAT initiative
- ❖ D-CMOS
 - ✓ Any issues ?



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Bridge Technology

LTMITV-W2W

Last Tactical Mile In-Transit Visibility

Warehouse to



W2W Background

◆ I MEF creation

- Late Summer 2003 - SYTEX (Prime Vendor/Systems integrator)
- Deployed to Iraq

◆ II MEF transitioned deployment and refined W2W material solution and business process

◆ MARCORSYSCOM assumed program management responsibilities in Aug 05



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W2W

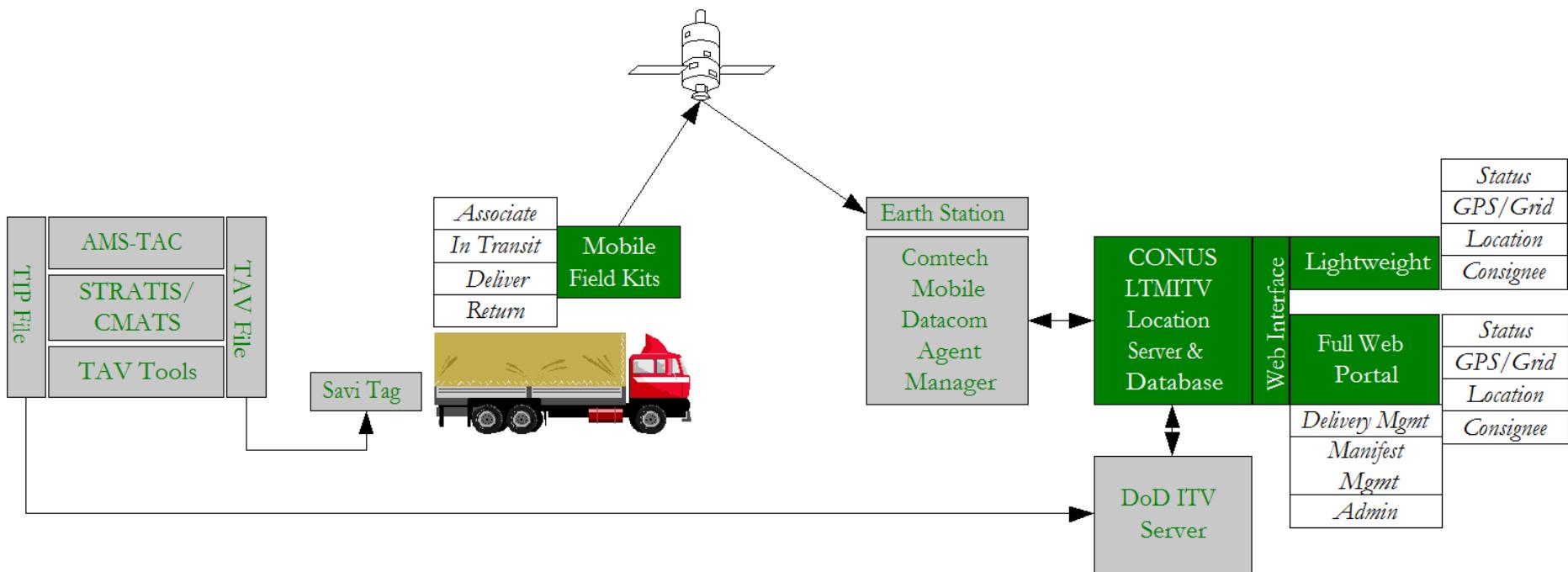
- ◆ Last-Mile' visibility of supplies forward
- ◆ Non-nodal location updates.
 - Not dependent on nodal interrogators
- ◆ Electronic capture of consignee data at delivery point
- ◆ Automated generation of AS1/AS2 transactions



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W2W





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W2W Principle Items

◆ Server

◆ Mobile Kit

- ◆ Computer (Laptop/tablet)
- ◆ Transceiver
- ◆ Cable Assembly
- ◆ Power Supply

No difference btw Base Unit Kit or Mobile Kit just how it is employed



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W2W Functional Overview

◆ Server

- Receives and parses TIP files or content level detail from ITV
- From Base Unit Kit or Mobile Kit
 - ◆ Receives location (GPS) updates
 - ◆ Receives camp drop, RUC pickup and RUC delivery data
- Provides rich query and lightweight query alternatives via web interface
- Sends AS1 and AS2 80 card column courier file updates to USMC server for consumption based on in-garrison and theatre business rules



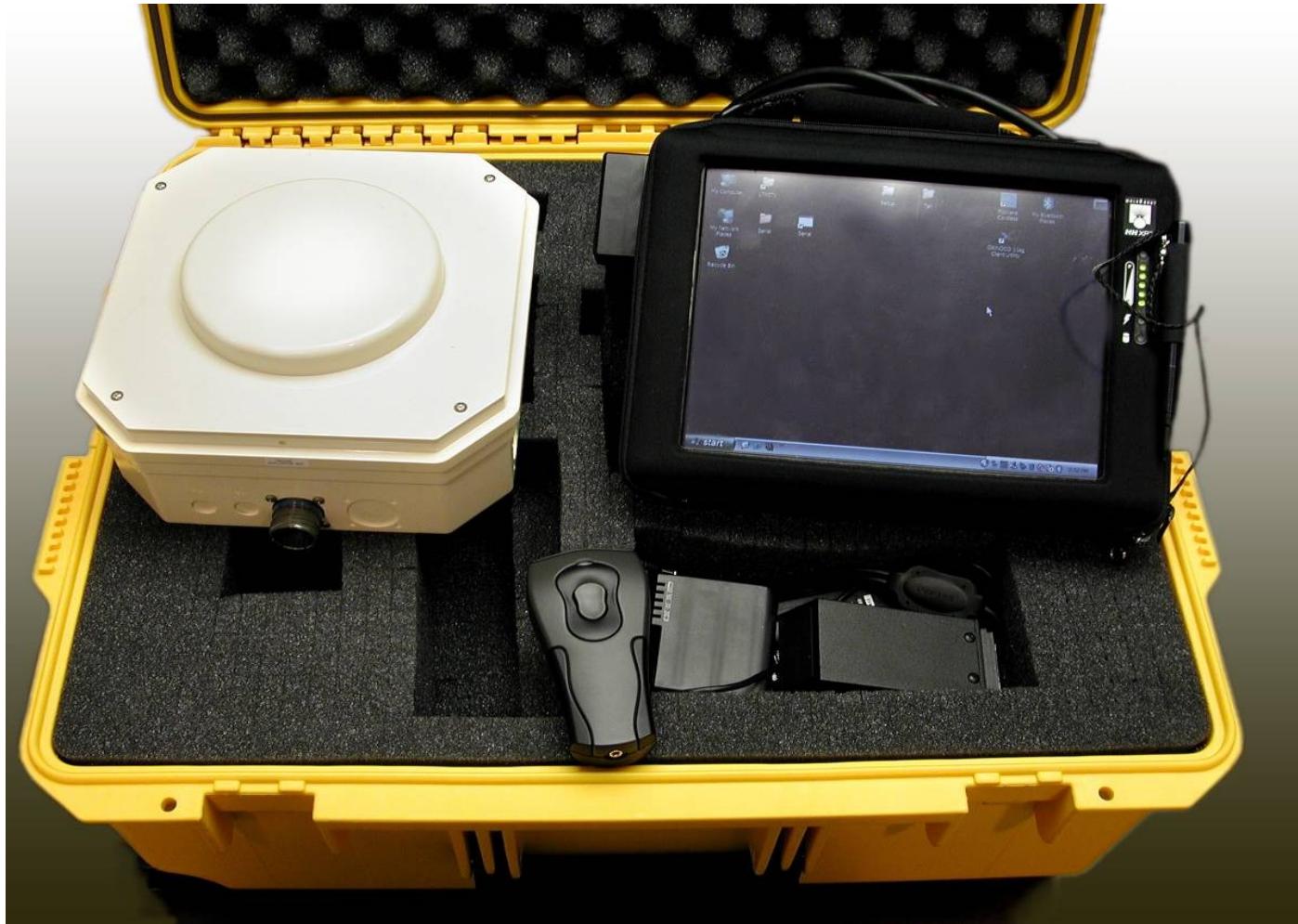
W2W Functional Overview

◆ Base Unit Kit or Mobile Unit Kit

- Computer with Visibility Tracking Program (VTP)
- At delivery preparation - input of PDC, AAC and Tag ID
- At Camp Drop, RUC Pickups and End RUC Deliveries
 - ◆ Mobile Unit Kit - GPS updates and input of Tag ID and Consignee data
 - ◆ Base Unit Kit - input of Tag ID and Consignee data



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- ◆ Visibility Tracking Program
- ◆ Software application that runs on Tablet PC, which is part of a Field Kit
 - A few touch screen, most pen-based
 - Pen-based provide brighter screens
 - Includes graphic keyboard pop-up to allow entry of name/textual data via keyboard
 - Pen-based also provides additional means of handwriting recognition for input



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W2W

VTP Main Menu

Last Tactical Mile In Transit Visibility

Warehouse to Warfighter Version 1.0.1858.24279

| | | | |
|--------|--------------------|--------------------|---------------------|
| Status | FIELD KIT #: 99999 | LOCAL TIME: 1603 | ZULU TIME: 2103 |
| | GRID: [NO FIX] | LATITUDE: [NO FIX] | LONGITUDE: [NO FIX] |

System Check < Tests for VTP Readiness

Start Route < START a New Delivery Session (Prepare for your Route)

RUC Delivery < DELIVER Gear to Consignee RUC

Camp Drop < DROP Gear at Intermediate Location (NOT to Consignee)

End Route < END the Current Delivery Session

Help < Documentation and Help for the VTP

Transceiver Load



- ◆ Correlates delivery manifest data and Tag IDs with a field kit that is placed within a delivery/convoy vehicle
- ◆ Provides a means to query the location and current status of materiel pushed from SMU/TMO forward via a web enabled interface
- ◆ Can be configured 2 ways:
 - Mobile unit on each supply convoy from warehouse
 - ◆ Direct RUC delivery - AS2 (D6T)
 - ◆ Intermediate camp drop - AS1
 - Fixed system at each camp
 - ◆ Capture subsequent RUC pickup from camp - AS2 (D6T)

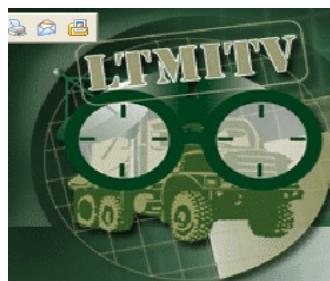


- ◆ Relies on satellite transceiver and GPS to communicate data to Location Server
 - Designed to use minimal bandwidth
 - Same transceivers as MTS and BFT
 - Provides robust seamless satellite data communications to ensure data that is sent up is not 'lost in the ether'
 - All communications between Field Kit and Satellite are encrypted
- ◆ Does not depend on a localized server
- ◆ Laptop does not use mapping software- it is purely an input/filter for data up to the Location Server



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W2W



LAST TACTICAL MILE IN TRANSIT VISIBILITY

Warehouse to Warfighter

Log In

Username:

Password:

Login

- [*I meant to go to the DoD ITV web site*](#)
- [*I am a Using Unit with low bandwidth but would like to query LTMITV*](#)



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W2W

LTMIV - Query - Microsoft Internet Explorer provided by AT&T WorldNet Service

File Edit View Favorites Tools Help

DoD ITV Server LTMIV Lightweight LTMIV Log Out

LAST TACTICAL MILE IN TRANSIT VISIBILITY

Warehouse to Warfighter

Query Manifest View Delivery Mgmt Admin

| RUC TAG | TCN | Items | Status | Last Position | Last Updated |
|--------------------------------|-------------------------------|-------|---------------------------|---|---------------------|
| MMX200 000000 | MMC10041710005XXX | 13 | Closed | 38° 54' 36" N 77° 13' 12" W 18SUJ 07513 09132 | 2/3/2005 6:06:08 PM |
| Document Number | NSN | | Nomenclature | | UI QTY RIC |
| MMX20051690001 | 5999010321692 | | ACCESSORY MAINT KIT TELE | | EA 00003 MC1 |
| MMX20051690002 | 6625010906789 | | ADAPTER,TEST,POWER SUPPLY | | EA 00004 MC1 |
| MMX20051690003 | 5895012509557 | | CONVERTER,MODEM,SI | | EA 00005 MC1 |
| MMX20051690004 | | | | | |
| MMX20051690005 | | | | | |
| MMX20051690006 | | | | | |
| MMX20051690007 | | | | | |
| MMX20051690008 | | | | | |
| MMX20051690009 | | | | | |
| MMX20051690010 | | | | | |
| MMX20051690011 | | | | | |
| MMX20051690012 | | | | | |
| MMX20051690013 | | | | | |

TagHistory - Microsoft Internet Explorer provided by AT&T WorldNet Service

TAG: 000004

| Log Date | Position | Status |
|---------------------|---|---------------------|
| 2/3/2005 6:17:37 PM | 38° 54' 36" N 77° 13' 12" W 18SUJ 07513 09132 | Closed |
| 2/3/2005 6:17:36 PM | 38° 54' 36" N 77° 13' 12" W 18SUJ 07513 09132 | Delivered |
| 2/3/2005 6:12:26 PM | 38° 54' 36" N 77° 13' 12" W 18SUJ 07513 09132 | Camp DropOff |
| 2/3/2005 6:09:56 PM | | In Transit |
| | | Waiting for Details |
| | | Pending |

start C. 2 P. R. C. >> My Documents >> > 1:54 PM Thursday



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W2W

home - Microsoft Internet Explorer provided by AT&T WorldNet Service

File Edit View Favorites Tools Help

Back Search Favorites Media Go

Address http://ltmitv.sytexinc.com/LTMITVLW/

Search Manifest DOC NUMBER: M2832143347281 NSN:
Tag ID: RUC:
TCN:

Search Reset

home - Microsoft Internet Explorer provided by AT&T WorldNet Service

File Edit View Favorites Tools Help

Back Search Favorites Media Go

Address http://addemo1.sytexinc.com/ltmitvlw/home.aspx

Search Manifest DOC NUMBER: M2832143347281 NSN:
Tag ID: RUC:
TCN:

Search Reset

| RUC TAG | TCN | Items | Status | Last Position | Last Updated |
|-----------------|-------------------|-------|---------------------|------------------------------|----------------------|
| M28321 730764 | M283214336T730764 | 17 | Closed | 33.35 N 117.41 W 61851 90164 | 12/2/2004 5:40:12 PM |
| Document Number | NSN | | Nomenclature | UI | QTY RIC |
| M2832143347281 | 2540014957611 | | SEAL,UPPER DOOR HIN | EA | 00001 MC1 |
| M2832143347291 | 2930014956890 | | FAN OPERATOR | EA | 00001 MC1 |
| M2832143356334 | 5330009668657 | | PACKING ASSORTMENT, | EA | 00001 MC1 |
| M2832143356336 | 5975005709598 | | STRAP,TIEDOWN,ELECT | HD | 00001 MC1 |
| M2832143356338 | 5970004194291 | | TAPE,INSULATION,ELE | RO | 00001 MC1 |
| M2832143356339 | 5940005250907 | | TERMINAL KIT | KT | 00001 MC1 |
| M2832143356354 | 6150010270125 | | CABLE ASSEMBLY,SPEC | EA | 00001 MC1 |
| M2832143356355 | 4820013988314 | | VALVE,CHECK | EA | 00002 MC1 |
| M2832143356390 | 6240001433070 | | LAMP,INCANDESCENT | EA | 00004 MC1 |
| M2832143356391 | 6240001536494 | | LAMP,INCANDESCENT | EA | 00004 MC1 |
| M2832143357323 | 5340012658911 | | HANDLE,DOOR | EA | 00001 MC1 |
| M2832143357329 | 5340011553798 | | LEVER,MANUAL CONTRO | EA | 00001 MC1 |
| M2832143357330 | 5310009752075 | | NUT,PLAIN,HEXAGON | HD | 00001 MC1 |
| M2832143357331 | 5340009850823 | | CLEVIS,ROD END | EA | 00001 MC1 |
| M2832143357332 | 5315008423044 | | PIN,COTTER | HD | 00001 MC1 |

start Camp Pendleton... 4 Internet Expl... Internet

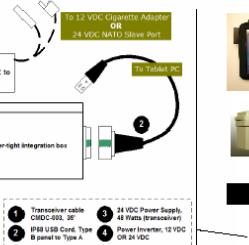
2:52 PM Monday

Lightweight Query



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Quick User Guides

| Last Tactical Mile In Transit Visibility | | lmtisupport@sytexinc.com | Quick User Guide | | | |
|---|--|---|------------------|-------------------|-------------------|----------------------|
| Welcome to the LTMIV Client Application Version 1.4.000.5259 | | | | | | |
| PREPARATION | 1 Gear Up |  <p>A. Check to see if you have all that you need from a field kit (see other side). <input type="checkbox"/> Tablet <input type="checkbox"/> Barcode <input type="checkbox"/> Cables <input type="checkbox"/> Transceiver <input type="checkbox"/> Inverter <input type="checkbox"/> OR Portable Power</p> | | | | |
| | 2 Power Up |  <p>B. Load field kit on the vehicle, including transceiver placement and power connections. Power on the tablet PC if not done so already. Click the barcode scanner to 'awaken' it. C. At the launch, download Firmware to connect the barcode reader, and launch the LTMIV Client Application if not up already. D. Run the System Check on the VTP (LTMIV Client Application). (See other side)</p> | | | | |
| | 3 Capture |  <p>E. If the TIP file for any of these was generated by AMS-TAC, ensure the TIP file has been sent to the LTMIV server. F. At the tablet PC, in the LTMIV client application, click on Start Route, Depart vehicle. G. Scan the Savi tag license plate barcode (on the tag itself) for each tagged pallet/container to be delivered. A beep indicates a successful scan. (See other side). H. Press Done when you have finished scanning tag IDs and verification of tag list/count. I. Enter rank, name, and convoy tasker ID for this delivery session and press Accept. J. Check the screen to ensure all data is correct, then press Start, and OK.</p> | | | | |
| | 4 Head Out |  <p>K. Transceiver Load status bar shows the data load to be sent to LTMIV. L. VTP running from the tablet PC will send GPS/grid updates to LTMIV at predefined intervals while en route. Position data is at the top of the VTP screen. GRID: 69134 27384 LATITUDE: 87.98 N LONGITUDE: -176.00 W (See other side)</p> | | | | |
| | 5 Deliver to RUC Consignee OR Camp Drop (not to consignee) | <p>When delivering to a RUC consignee:</p> <p>M. Click RUC Delivery. Scan only the Tag ID barcoded of all items to be delivered. N. When you have returned to the VTP and the IDs have uploaded, click Done.</p> <p>O. Enter consignee data from the signed manifest. Press Accept and then OK when completed. Continue to next delivery/drop. If this was the last stop, go to #6 below.</p> <p>When dropping at an intermediate location:</p> <p>L. Click Camp Drop. Scan only the Tag ID barcodes of all tagged items just delivered. M. When you have returned to the VTP and the IDs have uploaded, click Done. N. Enter the camp name and click Accept. Continue to next delivery/drop. If this was the last stop, go to #6 below.</p> | | | | |
| | 6 Reconcole |  <p>Q. After the last delivery/drop, no other action on the tablet PC is required until you have returned to origin. This allows tracking of the delivery asset back to its origin. P. Upon return to origin, click End Route. VTP will indicate if all tags have been accounted for. If so, click OK. If not, you will be asked to reconcile outstanding tags. Q. For each tag you must indicate delivered, camp dropped or not delivered/return to origin. Indicate consigne for delivered tags, and location for camp dropped tags. R. Once you are finished reconciling tags, click OK. Transceiver Load bar empties, another delivery route can be run, or the application can be Closed and tablet PC shut down.</p> | | | | |
| | 7 RUC Pickup from Camp |  <p>This step only applies to Field Kits that are configured as FIXED and situated at intermediate delivery points (not for delivery vehicles). For a RUC pickup:</p> <p>A. Press RUC Pickup. Enter consignee information and press Accept. B. Scan only the Tag ID barcoded of all items just picked up. C. Click Done, Click Yes, then OK.</p> | | | | |
| <p>If VTP or the LTMIV Client Application closes after being launched, or during a delivery session, check the power connection to the VTP, the transceiver, and the USB data connection to the tablet PC.</p> | | | | | | |
| Field Kit | | | | | | |
| ER GUIDE | | | | | | |
| lmtisupport@sytexinc.com | | | | | | |
| Quick Hints | | | | | | |
|  | | | | | | |
|  | | | | | | |
|  | | | | | | |
| Tablet PC Barcode Scanner | | | | | | |
|  | | | | | | |
| Transceiver | | | | | | |
|  | | | | | | |
| Cables & Inverter | | | | | | |
|  | | | | | | |
| Scanned in properly. From START ROUTE, Delivery or Camp Drop screen: | | | | | | |
| <p>scanned in properly. From START ROUTE, Delivery or Camp Drop screen:</p> <p>the tag IDs. After the scan, it will acknowledge with an audible 'beep'. The scanner loses connection with the tablet PC, it will return back within range (indicated by 3 quick tones), will be uploaded and added to the list of scanned tags.</p> | | | | | | |
| <p>Set Scan to clear the current ITV Tag. The set Scan list has already been uploaded on the VTP to the ITV Tag Number Field if you need to scan more barcodes.</p> | | | | | | |
| <p>en keypad at the bottom left of the tablet desktop to enter or correct data.</p> | | | | | | |
| <p>route. From the main screen:</p> | | | | | | |
| <p>E) is started and is</p> <table border="1"> <tr> <td>GRID: [OFF]</td> <td>LATITUDE: [OFF]</td> <td>LONGITUDE: [OFF]</td> </tr> </table> | | | | GRID: [OFF] | LATITUDE: [OFF] | LONGITUDE: [OFF] |
| GRID: [OFF] | LATITUDE: [OFF] | LONGITUDE: [OFF] | | | | |
| <p>Id, Latitude & Longitude are</p> <table border="1"> <tr> <td>GRID: 69134 27384</td> <td>LATITUDE: 87.98 N</td> <td>LONGITUDE: -176.00 W</td> </tr> </table> | | | | GRID: 69134 27384 | LATITUDE: 87.98 N | LONGITUDE: -176.00 W |
| GRID: 69134 27384 | LATITUDE: 87.98 N | LONGITUDE: -176.00 W | | | | |
| <p>er load goes down after several minutes. Be patient, as the GPS and/or difficulty locking on to a signal.</p> | | | | | | |
| <p>talk to the transceiver, the application will close after warning the user.</p> | | | | | | |

Version 2.0

LTMITV-W2W _____ **Web Site User Guide**

This guide is intended for Using Units/Consignees who wish to query for requisitioned gear which is en route along the last tactical mile! Gear that has been loaded up for delivery from a USMC garrison or tactical distribution point which has an active RFID tag associated can be queried here. **Position updates are by time interval instead of nodal-based, and consignee or intermediate drop location are provided down to the Document Number level.**

From the login page one can also navigate to the lightweight (text only query) portion of the web interface, or go directly to the DoD ITV Server. [Site](#)

Once logged in, you will be directed to the Query Page (below).

Main URL: <http://lmitv.systexinc.com/lmitv>

This site requires a username and password. Please email LTMITV support at the above address to request a username and password. Please include your name, rank, outfit and fat 4.

If you have a username and password, enter these and click [Login](#)

Note: If your gear cannot be found, the DoD ITV Server may be queried to further inquire as to the distribution channel.

Username:
Password:

Clicking on the DoD ITV Server or Lightweight URL will direct you to the top left log you out of the session and send you to the respective sight within the same browser window.

These buttons are primarily for supply and distribution activities who use the system for managing delivery sessions.

In this example, **Query by RUC** is implemented. One active tag ID/manifest record is returned for the time period of the last 24 hours.

NOTE: Status of "Waiting for Details" is also implicitly indicated if the **RUC TAG** column only has a **TAG ID**, no **RUC**.

Clicking the **RUC/TAG Link** will open a separate window with that Tag's Location and Status History within the system.

Clicking the **Expand Button** (Down Arrow) will return a list of Document Numbers contained within the manifest.

Clicking on a Document Number will return a detailed view of that single document, including status, as well as intermediate location or consignee data, where applicable.

Clicking **BACK** will return the display to the prior screen.

Query by RUC or NSN will return all Tag IDs/Manifests associated with the queried element.

Query by Tag ID, TSN or Document Number will return the single tag, manifest associated with that data element.

If by Document Number, the record will be **highlighted** among all items on the associated manifest.

LAST TACTICAL MILE IN TRANSIT VISIBILITY
Warehouse to Warfighter

Query **Manifest View** **Delivery Maps** **Address**

Search **RUC/RUCID** **NSN** **TCN**
Manifest Data **RFID** **Last 48 hours** **Show SHT**

From this page one can query by Document Number, RUC, NSN, Tag ID or TCN.

Limit your query results by **time interval**.

Search **RUC/RUCID** **NSN** **TCN**
Manifest Data **RFID** **Last 48 hours** **Show SHT**

Status **Delivery**

RUC and Tag, License Plate ID

Lead TSN for this manifest

of Document Number on Manifest

Item **Status** **Last Position**

Lead TSN **Lead 14 Weeks** **AR/DRH** **Last Updated**

Status of Delivery

Last recorded position in last hour **Last status update, grid (LTM, WGS-84)**
Last grid (LTM, WGS-84)

Pending = Tag ID: Manifest has been identified to go on delivery, and content level detail has been received from the field or from the DoD ITV Server.

Waiting for Details = Tag ID: Manifest has been identified to go on delivery, but content level detail has yet to be received. *

In Transit = Gear is on track, convey for delivery.

Camp Destroyed = Gear has been delivered to an intermediate location and remains tagged for future delivery or for consigne pickup.

Closed = DELIVERED TO CONSIGNEE

RUC **TDN** **Row** **By**

Query

Clicking the **Query** button at the top of the page will return the results will clear any existing query results and reset the page.

Lightweight URL: <http://lmitv.systexinc.com/lmitvlw>

From this page one can query by Document Number, RUC, NSN, Tag ID or TCN.

WebSite/Query

Status, location, date/time of most recent status (GMT) and consigne, if applicable.



Next Steps

- ◆ Continue to assess operational use
- ◆ Continue in-theatre fielding and assessment
- ◆ Field Kits to all 3 MEF's for Training Base
- ◆ Determine additional requirements
- ◆ Conduct Requirements Board for seamless distribution process (AMS/W2W ?)
- ◆ Future minor releases
- ◆ Passive RFID options
- ◆ Smaller footprint (Handheld)
- ◆ Converge with other SatCom providers
- ◆ MCEITS, IA Process



What it all Means

- ◆ Visibility from Warehouse to Warfighter
- ◆ Robust COTS platform
- ◆ Simplified approach
 - Uses pre-positioned data
 - Economic use of bandwidth
- ◆ Not intended as another stovepipe
- ◆ Reusable platform to solve real problems right now...
 - ◆ ...while recognizing that change is inevitable with:
 - Increased use and feedback
 - Technology trends and adoption
 - Standards, policy and directive evolution



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Questi



Transportation and Distribution
Information Systems
(TDIS)
Program Office

*Thank
You!*